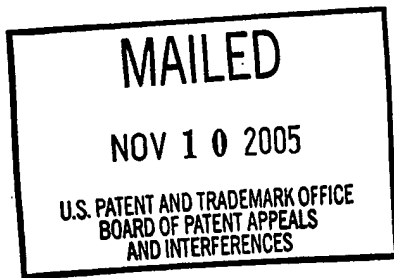


The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**



Ex parte BRIAN D. JOHNSON

Appeal No. 2005-2105
Application No. 09/048,838

HEARD: October 19, 2005

Before NASE, CRAWFORD, and BAHR, Administrative Patent Judges.
BAHR, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's rejection of claims 1-10 and 13-17. Claims 11 and 12 stand withdrawn from consideration as not being directed to an elected invention.

We REVERSE.

BACKGROUND

The appellant's invention relates to fairing arrangements for aircraft and, in particular, to seal arrangements for use with fairings associated with flying control surfaces, such as ailerons (appellant's specification, page 1). A copy of the claims under appeal is set forth in the appendix to the appellant's brief.

The Applied Prior Art

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

| | | |
|----------|-----------|---------------|
| Williams | 5,071,092 | Dec. 10, 1991 |
| Shine | 5,156,360 | Oct. 20, 1992 |

The Rejections

Claims 1-10 and 13-17 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which appellant regards as the invention.¹

¹ Although the examiner did not repeat this rejection in the answer (mailed August 14, 2001), we presume that the examiner has not withdrawn the rejection in view of the examiner's agreement (answer, page 2) with the appellant's statement of issues, which includes the indefiniteness rejection on page 4 of the brief (filed June 4, 2001), and the examiner's response (answer, page 3) to appellant's arguments with regard to this rejection.

Claims 1-10 and 13-17 stand rejected under 35 U.S.C. § 103 as being unpatentable over Williams in view of Shine.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellant regarding the above-noted rejections, we make reference to the rejection (mailed January 4, 2001) and answer for the examiner's complete reasoning in support of the rejections, and to the brief and reply brief (filed October 10, 2001) for the appellant's arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellant's specification and claims, to the applied prior art references, and to the respective positions articulated by the appellant and the examiner. As a consequence of our review, we make the determinations which follow.

The indefiniteness rejection

The legal standard for definiteness is whether a claim reasonably apprises those of skill in the art of its scope. See In re Warmerdam, 33 F.3d 1354, 1361, 31 USPQ2d 1754, 1759 (Fed. Cir. 1994). In determining whether this standard is met, the definiteness of the language employed in the claim must be analyzed, not in a vacuum, but always in light of the teachings of the prior art and of the particular application

disclosure as it would be interpreted by one possessing the ordinary level of skill in the pertinent art. In re Johnson, 558 F.2d 1008, 1015, 194 USPQ 187, 193 (CCPA 1977).

The examiner's concern that the phrase "rubber or rubber-like" is alternative and indefinite or that the term "rubber-like" is unclear as to what characteristics are being claimed as limitations (rejection, page 2) is unfounded. As pointed out by the appellant, the term "rubber-like" has an established meaning in the art. One of ordinary skill in the art would understand a rubber or rubber-like material to encompass natural and synthetic rubber, as well as materials having the well-known engineering properties of rubber, namely, elasticity and toughness. We thus agree with the appellant that this terminology does not render the claims indefinite. The rejection of claims 1-10 and 13-17 under 35 U.S.C. § 112, second paragraph, is reversed.

The obviousness rejection

Each of appellant's independent claims 1, 14, 15, 16 and 17 requires a flexible seal member comprising a composite sheet element of rubber or rubber-like material incorporating a plurality of reinforcing plies across at least a portion of said sheet element, each ply comprising one or more fabric elements. The examiner has rejected these claims, as well as claims 2-10 and 13 depending therefrom, as being unpatentable over Williams in view of Shine. For the reasons which follow, we cannot sustain the rejection.


Williams discloses a fairing arrangement for an aircraft including a flexible seal arrangement 13 comprising a plurality of slidably overlapping layers 16 of longitudinally extending fingers 16a, 16b on a first fairing portion and overlapping and slidably engaging the other fairing portion, one of the fairing portions being a fixed structure and the other fairing portion being a control surface. The fingers lie in laterally staggered relationship with respect to one another so as to accommodate differential movement between the fairing portions when the control surface is angularly disposed relative to the fixed structure. In the embodiment shown in Figures 1 and 2, the double layer of fingers 16 comprises an outer layer 16a of spring steel fingers coated with a low friction material such as PTFE and an inner layer 16b of plastic or nylon fingers. At least the outer spring steel layer 16a is pre-loaded so as to maintain the assembly in cross-sectional conformity with the fixed fairing. Figures 3, 4 and 6 of Williams show an alternative embodiment in which the spring steel fingers 16 are sandwiched between the outer and inner nylon fingers 18a, 18b respectively. The non-metallic fingers may be formed as integrally molded fingers 19 having a dividing web 19a which effectively forms lengthwise grooves 21 for slidably engaging the spring steel fingers 16, with the groove depth being adequate to allow lateral displacement of the fingers 16 when in use.


Williams' seal arrangement lacks at least the rubber or rubber-like material and plurality of reinforcing plies each comprising one or more fabric elements, as required in each of appellant's independent claims 1, 14, 15, 16 and 17. In order to make up for these deficiencies, the examiner looks to the teachings of Shine.

Shine is directed not to a flexible seal for a fairing arrangement but to a flexible fire seal for overlapping cowl side edges. As explained by Shine in column 2, lines 38-47, to avoid at least a portion of the overlapping trailing side edge of the forward cowl from binding against the leading side edge of the aft cowl, in the event the cowls are closed in the wrong order, the leading side edge is provided with a cut-out region shaped and sized to permit passage therethrough of that portion of the trailing side edge that would otherwise bind against the leading side edge. A fireproof strip seal is attached to the leading side edge and protrudes transversely across the cut-out region to fill in the cut-out. The seal is sufficiently flexible so as to bend aside and not interfere with the overlapping trailing side edge as it passes through the cut-out region. The seal 24 is made primarily of a rubber material 26. The rubber 26 is reinforced by two layers of fiberglass fabric 28a, 28b. Thin layers of rubber 28c, 28d are interposed between the fiberglass layers 28a, 28b and enhance their flexibility.

Given the vastly different structures and functions of Williams' seal and Shine's seal, it is not apparent to us why one of ordinary skill in the art would have been motivated by their combined teachings to modify Williams' seal to arrive at the invention of independent claims 1, 14, 15, 16 and 17. The examiner cites as motivation to provide fabric in the seals of Williams "the inherent improvement of increased strength by including fabric within the seal" (rejection, page 3). The examiner has not pointed to any evidence in the record to indicate that the provision of fabric in the finger element layers of Williams' seal would necessarily increase its strength or that such increase in strength is required. Rejections based on 35 U.S.C. § 103 must rest on a factual basis. In making such a rejection, the examiner has the initial duty of supplying the requisite factual basis and may not, because of doubts that the invention is patentable, resort to speculation, unfounded assumptions or hindsight reconstruction to supply deficiencies in the factual basis. In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967), cert. denied, 389 U.S. 1057 (1968). As such factual basis is lacking in this case, as explained above, it follows that the obviousness rejection of independent claims 1, 14, 15, 16 and 17 and dependent claims 2-10 and 13 cannot be sustained.

To summarize, the decision of the examiner to reject claims 1-10 and 13-17 under 35 U.S.C. § 103 is REVERSED.


JEFFREY V. NASE
Administrative Patent Judge


MURRIEL E. CRAWFORD
Administrative Patent Judge


JENNIFER D. BAHR
Administrative Patent Judge

BOARD OF PATENT
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